

Amendments to the Claims:

Please cancel claims 1-10, without prejudice, and amend claim 23. Following is a complete listing of the claims pending in the application, as amended:

1-10. (Cancelled)

11. (Previously Presented) A method of applying adhesive pads to a plurality of microelectronic components, comprising:

applying an adhesive layer on at least a portion of a rear surface of a microelectronic wafer, the microelectronic wafer comprising a plurality of microelectronic components, each of which has a back surface;

defining a plurality of separable, spaced-apart adhesive pads within the adhesive layer, each of the microelectronic components having an adhesive pad attached to its back surface with the adhesive pad covering less than the entire back surface; and

singulating the microelectronic components by cutting through the wafer without cutting through an entire thickness of the adhesive layer.

12. (Original) The method of claim 11 wherein the adhesive pads are defined by cutting the adhesive layer without cutting through the wafer.

13. (Original) The method of claim 11 further comprising separating the microelectronic components and their associated adhesive pads from a remainder of the adhesive layer.

14. (Original) The method of claim 11 further comprising positioning a mask between the adhesive layer and a radiation source.

15. (Original) The method of claim 11 further comprising contacting the adhesive layer with a mounting member prior to singulating the microelectronic components.

16. (Original) The method of claim 15 further comprising selectively treating the adhesive layer to yield a first adherence between the mounting member and second surfaces of the adhesive pads and a second, greater adherence between the mounting member and the remainder of the adhesive layer.

17. (Previously Presented) The method of claim 11 further comprising positioning a mask between the adhesive layer and a radiation source and separating the microelectronic components and their associated adhesive pads from a remainder of the adhesive layer.

18. (Previously Presented) The method of claim 15 further comprising positioning a mask between the adhesive layer and a radiation source and delivering radiation through the mask to selectively expose the adhesive pads, thereby reducing adhesion of the adhesive pads to the mounting member.

19. (Original) The method of claim 17 further comprising delivering radiation through the mask to selectively expose either the adhesive pads or the remainder of the adhesive layer.

20. (Previously Presented) The method of claim 19 wherein the radiation exposure is selected to alter adhesion between the adhesive layer and a mounting member such that the mounting member is less adherent to the adhesive pads than to the remainder of the adhesive layer.

21. (Original) The method of claim 11 further comprising contacting the adhesive layer with a mounting member after defining the adhesive pads and prior to singulating the microelectronic components.

22. (Original) The method of claim 11 further comprising contacting the adhesive layer with a mounting member prior to singulating the microelectronic components, singulating the microelectronic components comprising cutting through the wafer to a depth spaced from the mounting member.

23. (Currently Amended) The method of claim 11 wherein singulating the microelectronic components comprises dicing the wafer with a wafer saw.

24. (Cancelled)

25. (Original) The method of claim 11 wherein the adhesive pad of each singulated microelectronic component has an exposed adhesive surface, the method further comprising attaching the exposed adhesive surface of an adhesive pad to an active surface of a microelectronic component mounted on a substrate.

26. (Previously Presented) A method of assembling a stacked microelectronic component assembly, comprising:

attaching a first microelectronic component to a substrate with an active surface of the first microelectronic component oriented away from the substrate;

applying an adhesive layer on at least a portion of a rear surface of a microelectronic wafer;

defining a plurality of spaced-apart adhesive pads and a remainder within the adhesive layer;

dicing the wafer into a plurality of second microelectronic components, each microelectronic component having a back surface to which at least one of the adhesive pads is attached, the adhesive pad covering less than the entire back surface to which it is attached;

thereafter, removing one of the second microelectronic components with its attached adhesive pad, leaving the remainder of the adhesive layer; and

attaching the removed second microelectronic component to the first microelectronic component by contacting the active surface of the first microelectronic component with the adhesive pad attached to the second microelectronic component.

27-49. (Cancelled)

50. (Previously Presented) The method of claim 26 wherein removing one of the second microelectronic components further comprises leaving at least a remaining one of the plurality of second microelectronic components attached to the remainder of the adhesive layer.

51. (Previously Presented) The method of claim 26 wherein the adhesive pads and the remainder are defined by cutting the adhesive layer without cutting through the wafer.

52. (Previously Presented) The method of claim 26 further comprising positioning a mask with respect to the adhesive layer and delivering radiation through the mask to selectively expose either the adhesive pads or the remainder of the adhesive layer, wherein the radiation exposure is selected to alter adhesion between the adhesive layer and a mounting member such that the mounting member is less adherent to the adhesive pads than to the remainder of the adhesive layer.

53. (Previously Presented) The method of claim 26 further comprising contacting the adhesive layer with a mounting member after defining the adhesive pads and prior to dicing the wafer.

54. (Previously Presented) The method of claim 26 further comprising contacting the adhesive layer with a mounting member prior to dicing the wafer, dicing the wafer comprising cutting through the wafer to a depth spaced from the mounting member.

55. (Previously Presented) The method of claim 26 wherein dicing the wafer comprises cutting through the wafer without cutting through an entire thickness of the adhesive layer.

56. (Previously Presented) A method of applying adhesive pads to a plurality of microelectronic components, comprising:

applying an adhesive layer on a microelectronic wafer, the microelectronic wafer comprising a first microelectronic component and a second microelectronic component, each of which has a back surface in contact with the adhesive layer;

cutting the adhesive layer, without cutting through the wafer, to define separable, spaced-apart first and second adhesive pads, the first adhesive pad being attached to the back surface of the first microelectronic component and the second adhesive pad being attached to the back surface of the second microelectronic component, wherein the first adhesive pad covers less than the entire back surface of the first microelectronic component and the second adhesive pad covers less than the entire back surface of the second microelectronic component; and

singulating the microelectronic components.

57. (Previously Presented) A method of applying adhesive pads to a plurality of microelectronic components, comprising:

applying an adhesive layer on a microelectronic wafer, the microelectronic wafer comprising a first microelectronic component and a second microelectronic component, each of which has a back surface in contact with the adhesive layer;

defining separable, spaced-apart first and second adhesive pads within the adhesive layer, the first adhesive pad being attached to the back surface of the first microelectronic component and the second adhesive pad being attached to the back surface of the second microelectronic component, wherein the first adhesive pad covers less than the entire back surface of the first microelectronic component and the second adhesive pad covers less than the entire back surface of the second microelectronic component;

after defining the first and second adhesive pads, contacting the adhesive layer with a mounting member; and

after contacting the adhesive layer with the mounting member, singulating the first and second microelectronic components by cutting through the wafer to a depth spaced from the mounting member.